

Amendments to the Claims:

This listing of claims replaces any and all prior claim lists.

Listing of Claims:

Claims 1-4 (canceled).

Claim 5 (currently amended). A copolymer of ethylene and α -olefin of from 4 to 20 carbon atoms having melt flow rate (MFR) measured at 190°C under a load of 21.8N according to JIS K7210-1995 of from 1 to 100 g/10 minutes, melt tension at 190°C (MT), intrinsic viscosity ($[\eta]$) and a chain length A satisfying following formula (1) to (3) and a melt flow rate ratio (MFRR) calculated by dividing the melt flow rate measured at 190°C under a load of 21.8N according to JIS K7210-1995 by said MFR of 60 or more, wherein the chain length A is a chain length at peak position of a logarithm normal distribution curve of a component having the highest molecular weight among logarithm normal distribution curves obtained by dividing a chain length distribution curve obtained by gel permeation chromatography measurement into at least two logarithm normal distribution curves,

$$2 \times \text{MFR}^{-0.59} < \text{MT} < 20 \times \text{MFR}^{-0.59}$$

$$1.02 \times \text{MFR}^{-0.094} < [\eta] < 1.50 \times \text{MFR}^{-0.156}$$

$$3.30 < \log A < -0.0815 \times \log(\text{MFR}) + 4.05$$

formula (1)

formula (2), and

formula (3).

Claim 6 (previously presented). A copolymer of ethylene and α -olefin of from 4 to 20 carbon atoms having melt flow rate (MFR) of from 1 to 100 g/10 minutes, melt tension at

190°C (MT), intrinsic viscosity ($[\eta]$) and characteristic relaxation time at 190°C (τ ; unit is sec), satisfying the following formula (1) to (4):

$$\begin{aligned} 2 \times \text{MFR}^{-0.59} < \text{MT} < 20 \times \text{MFR}^{-0.59} \\ 1.02 \times \text{MFR}^{-0.094} < [\eta] < 1.50 \times \text{MFR}^{-0.156} \\ 2 < \tau < 8.1 \times \text{MFR}^{-0.746} \end{aligned}$$

formula (1)
formula (2), and
formula (4).

Claim 7 (previously presented). The copolymer of ethylene and α -olefin according to Claim 5 or 6, wherein the copolymer of ethylene and α -olefin has activation energy for melt flow of not less than 60 kJ/mol.

Claim 8 (previously presented). The copolymer of ethylene and α -olefin according to Claim 5 or 6, wherein the copolymer of ethylene and α -olefin has swell ratio (SR) and $[\eta]$ satisfying the following formula (6):

when $[\eta] < 1.20$, $-0.91 \times [\eta] + 2.232 < \text{SR} < 2$, and

when $[\eta] \geq 1.20$, $1.17 < \text{SR} < 2$.